

Appl. No. : 10/003,703
Filed : October 23, 2001

SUMMARY OF INTERVIEW

Exhibits and/or Demonstrations

An exemplary claim was sent to the Examiner for review.

Identification of Claims Discussed

Exemplary claim and other claim features that distinguish over the cited art.

Identification of Prior Art Discussed

Sugar and Nevo.

Proposed Amendments

An exemplary new claim was discussed.

Principal Arguments and Other Matters

Discussed how the exemplary claim distinguishes over the cited art. Also discussed several additional claim features.

Results of Interview

The Examiner tentatively agreed that the structure shown in applicant's Figure 8, which is described in new claim 53 presented herein, appears to overcome the currently cited prior art. The Examiner further suggested fleshing out the last claim limitation in e.g., Claim 1, with respect to how prioritization is performed.

Appl. No. : 10/003,703
Filed : October 23, 2001

REMARKS

This amendment is in response to the Office Action dated May 2, 2006. By this paper, Claims 1, 17, 22-24, 27-35, and 37-44 have been amended; Claims 18-21, 25-26, and 36 have been canceled; and Claim 53 has been added. Thus, Claim 1-17, 22-24, 27-35, 37-44, and 53 are currently pending and are presented for consideration.

Claim Rejections under 35 U.S.C. § 102(e)

In Section 4 of the Office Action, Claims 1-29 and 33-44 are rejected under 35 U.S.C. § 102(e) as being anticipated by Sugar (U.S. Patent Application No. 2002/0061031). Furthermore, in Section 5 of the Office Action, Claims 1, 3-17, 19-30, and 33-44 are rejected under 35 U.S.C. § 102(e) as being anticipated by Nevo (U.S. Patent Application No. 2005/0078616). In view of the amendments above and the following remarks, Applicant respectfully requests reconsideration of these claim rejections.

Sugar

Sugar describes, in general, "[i]nterference mitigation or collision avoidance systems and procedures to allow different wireless local area network (WLAN) communication protocols to co-exist in the same frequency band." *Sugar*, Abstract. The Sugar system discloses that:

The choice of which WLAN to transmit may be determined by establishing a priority for different WLAN networks or for the type of data or channel that is to be carried on the WLAN. For example, voice and video communications, which are often carried on synchronous channels, are typically more sensitive to added latency than data communications. Voice and video channels would therefore normally be given a higher priority than given for a data exchange. Sugar, paragraph [0054] (emphasis added).

Thus, Sugar appears to disclose a interference mitigation system that determines which protocol should be transmitted based on established priorities for the protocols. Sugar further describes that "[i]f Shared CSMA Mode is not enabled, the MPD [multi-protocol wireless communication device] alternates access ownership between 802.11 and HomeRF during the contention period based on their relative network load. For example, if the 802.11 network load is 10% and the HomeRF CSMA network load is 30%, the MPD allows the HomeRF to use the contention

Appl. No. : 10/003,703
Filed : October 23, 2001

period 3 out of every 4 times both networks share the same frequency, and allows the 802.11 network to use the contention period 1 out of every 4 times. *Sugar*, paragraph [0128] (emphasis added). Thus, Sugar also appears to provide access during contention transmission periods based on network loads for the protocols.

Nevo

Nevo is directed towards "multiples wireless communication protocol methods and apparatuses including quality of service considerations." *Nevo*, Title. Nevo discloses that "[t]he apparatus is further provided with at least one controller manager to operate the at least one wireless transceiver to perform the transmits and receives in accordance with the first and second protocols in a coordinated manner, taking into consideration quality of service criteria to be achieved for the respective protocols." *Id.*, Abstract. In coordinating transmission of communications, Nevo discloses that a "To further improve the operating efficiencies of both network, instead of just letting the interfering devices 104a and 104b resolve each of the frequency interference, after it occurred, through conventional collision detection, back off and retry approaches, wireless device 100 coordinates the operation of devices 104a and 104b to proactively reduce actual occurrence of interference. More specifically, for the illustrated embodiments, either devices 104a or devices 104b are selected to be the "dominant" devices. The non-selected devices are considered to be the dominated devices. The dominated devices are notified, from time to time, to suspend operation to pro-actively avoid interference with the dominant devices, allowing the dominant devices to continue to operate without interference." *Id.* at para. [0048] (Emphasis added). Thus, Nevo appears to teach a system wherein particular *devices* are determined to be dominant and other *devices* are determined to be dominated, where the dominant devices are given transmission priority over the dominated devices.

Applicant respectfully submits that anticipation under 35 U.S.C. 102(e) requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, (Fed. Cir. 1987); *See also*, M.P.E.P. § 2131. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (Emphasis added). Additionally, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to

Appl. No. : 10/003,703
Filed : October 23, 2001

support the determination that the inherent characteristic necessarily flows from the teachings of the applied prior art." *See* M.P.E.P. § 2112 (Emphasis added). In view of the comments below, Applicant respectfully asserts that the pending claims are not anticipated by the cited art and requests removal of all rejections.

Claim 53 recites a method of moderating transmission of data in a communication network comprising a particular method of determining which of a first and second transmission should be moderated. More particularly, Claim 53 recites, in pertinent part:

A method of moderating transmission of data in a communication network, wherein a first device transmits a first transmission using a first protocol and a second device transmits a second transmission using a second protocol, the first and second protocols being associated with respective first and second priorities, wherein the first priority is higher than the second priority, the method comprising:

....
moderating the second transmission in response to determining that the second current quality of service level is within the second quality of service range;

moderating the first transmission in response to determining that (1) the second current quality of service level is not within the second quality of service range and (2) the first current quality of service level is within the first quality of service range; and

moderating the first transmission in response to determining that (1) the second current quality of service level is not within the second quality of service range and (2) the first current quality of service level is not within the second quality of service level.

Thus, the method of Claim 53 may moderate either of the first or second transmissions depending on the current quality of service levels of the first and second transmission. The cited art fails to teach or suggest the above-cited method of moderating transmissions. For example, the cited art fails to teach or suggest that a higher priority transmission is moderated as recited in Claim 53: "moderating the first transmission in response to determining that (1) the second current quality of service level is not within the second quality of service range and (2) the first current quality of service level is within the first quality of service range." In contrast, Sugar describes that "in order to guarantee an acceptable level of voice quality in systems supporting both voice and data users, the MPD assigns a higher delivery priority to SCO packets than to

Appl. No. : 10/003,703
Filed : October 23, 2001

— ACL or 802.11 data.” *Sugar*, para. [0084]. Thus, while *Sugar* appears to assign a higher priority to a particular type of packets, *Sugar* fails to disclose the method of moderating transmissions as recited in Claim 53.

Similar to *Sugar*, *Nevo* also fails to disclose the method of moderating transmissions as recited in Claim 53. For example, *Nevo* describes that a “controller manager is equipped ... to give priority to the first messages over second messages to be transmitted to a selected one or selected ones of the second network devices in accordance with the second protocol, if message types of the first messages are determined of a multi-media type.” *Nevo*, para. [0009]. *Nevo* further describes that “on an on going basis, network manager 904, predicts when interference will occur ... [and] preemptively notifies the dominates devise to suspend operation accordingly, thereby allowing the dominant devices to operate without interference.” *Id.* at para [0050]. Accordingly, *Nevo* appears to teach that the dominate device is given priority over the dominated device. Neither of the cited references teach or suggest, however, the process of moderating either the first or the second transmissions, where one transmission is a higher priority transmission, as recited in Claim 53, for example. In view of the comments and claim amendments presented herein, reconsideration and notice of allowance of amended Claim 53 is respectfully requested.

Amended Claim 1 recites, in pertinent part:

determining a first priority associated with the first transmission and a second priority associated with the second transmission, wherein the first priority is higher than the second priority [and]

....

prioritizing transmission of the first and second transmissions so as to maintain each of the first and second transmissions within their respective desired service levels, wherein the prioritizing is based at least partly on a determination as to whether the determined current quality of service of the second transmission is within the second quality of service range.

Thus, Claim 1 recites a method of prioritizing that considers a current quality of service of a lower priority transmission in order to determine which of the first or second transmissions to

Appl. No. : 10/003,703
Filed : October 23, 2001

moderate. Sugar and Nevo both fail to teach or suggest at least the feature of prioritizing "based at least partly on a determination as to whether the determined current quality of service of the second transmission is within the second quality of service range." For example, Sugar appears to disclose that voice quality packets are given a higher priority. *Sugar*, para. [0084]. Sugar fails to teach or suggest, however, that prioritizing is "based at least partly on a determination as to whether the determined current quality of service of the second transmission is within the second quality of service range," as recited in Claim 1. Similarly, Nevo also fails to teach this feature. As noted above, Nevo appears to prioritize devices, rather than transmission protocols. *Nevo*, para [0048]. Nevo further teach that a dominate device is given priority over the dominated device, rather than "prioritizing transmission ... wherein the prioritizing is based at least partly on a determination as to whether the determined current quality of service of the second [lower priority] transmission is within the second quality of service range," as recited in Claim 1. Accordingly, Nevo also fails to teach or suggest at least this feature of Claim 1. In view of the comments and claim amendments presented herein, reconsideration and notice of allowance of amended Claim 1 is respectfully requested.

Amended Claim 33 recites, in pertinent part:

A data collision rectification device for use in a wireless communication network wherein data transmissions using frequency-overlapping protocols comprising a first protocol and a second protocol operate to exchange information between a plurality of data transfer nodes, the device comprising

....

a synchronization module which moderates the first transmission in response to determining that (1) the first transmission priority is higher than the second transmission priority, (2) the second current quality of service is not within an acceptable quality of service range for transmissions using the second protocol, and (3) the first current quality of service is within an acceptable quality of service range for transmissions using the first protocol

Thus, Claim 33 recites a method that moderates a higher priority transmission, e.g., the first transmission, in response to determining that the current quality of service of the first and second transmissions meet certain criteria. As noted above, the cited art fails to teach or suggest this feature. For example, Sugar discloses that "in order to guarantee an acceptable level of voice quality in systems supporting both voice and data users, the MPD assigns a higher delivery

Appl. No. : 10/003,703
Filed : October 23, 2001

priority to SCO packets than to ACL or 802.11 data.” *Sugar*, para. [0084]. However, Sugar fails to teach or suggest any moderation of a higher priority transmission, and furthermore, moderation of a higher priority transmission in response to determining “that (1) the first transmission priority is higher than the second transmission priority, (2) the second current quality of service is not within an acceptable quality of service range for transmissions using the second protocol, and (3) the first current quality of service is within an acceptable quality of service range for transmissions using the first protocol,” as recited in Claim 33. Nevo similarly fails to teach or suggest the features of Claim 33. For example, Nevo teaches that “network manager 904, predicts when interference will occur ... [and] preemptively notifies the dominate devise to suspend operation accordingly, thereby allowing the dominant devices to operate without interference.” *Id.* at para [0050]. However, Nevo fails to teach or suggest the any moderation of a higher priority transmission, and furthermore, moderation of a higher priority transmission in response to determining “that (1) the first transmission priority is higher than the second transmission priority, (2) the second current quality of service is not within an acceptable quality of service range for transmissions using the second protocol, and (3) the first current quality of service is within an acceptable quality of service range for transmissions using the first protocol,” as recited in Claim 33. In view of the comments and claim amendments presented herein, reconsideration and notice of allowance of amended Claim 33 is respectfully requested.

Claim 17 recites, in pertinent part:

A method for collision avoidance ... comprising:

....

moderating the first [higher priority] transmission in response to determining that a first current quality of service of the first transmission is within a desired first quality of service range and determining that a second current quality of service of the second transmission is outside of a desired second quality of service range; and

moderating the second [lower priority] transmission in response to determining that the second current quality of service of the second transmission is outside of the desired second quality of service range.

Thus, Claim 17 recites a method wherein a higher priority transmission may be moderated. As noted above, the cited references each fail to teach or suggest this feature. Additionally, the cited art fails to teach or suggest moderating a higher priority transmission “in response to determining

Appl. No. : **10/003,703**
Filed : **October 23, 2001**

— that a first current quality of service of the first transmission is within a desired first quality of service range and determining that a second current quality of service of the second transmission is outside of a desired second quality of service range,” as recited in Claim 17. In view of the comments and claim amendments presented herein, reconsideration and notice of allowance of amended Claim 17 is respectfully requested.

Appl. No. : 10/003,703
Filed : October 23, 2001

Summary

Certain features of each pending independent claim have been discussed above. However, the discussed features are only a limited representation of the features that are believed to be patentable over the cited art. Applicant requests that the Examiner not only consider each claim in view of the features discussed herein, but also considers the non-discussed features. Furthermore, because a rejection under 35 U.S.C. §102 requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," Applicant further requests that the combinations of features in each claim are also considered. *Verdegaal*.

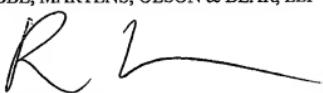
Claims 2-16 depend from Claim 1; Claims 22-24 and 27-32 depend from Claim 17; and Claims 34-35, and 37-44 depend from Claim 33. The dependent claims include each of the limitations of their respective base claims and are, therefore, believed to be allowable over the cited art at least for the reasons discussed above with reference to their respective based claims. Reconsideration of Claims 1-17, 22-24, 27-35, 37-44, and 53, is respectfully requested.

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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